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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/695,236	10/28/2003	Jennifer L. Elster	L187-1	4963
7590		11/10/2004		
Joy L. Bryant P.O. Box 590 Lightfoot, VA 23090			EXAMINER KANG, JULIANA K	
			ART UNIT 2874	PAPER NUMBER

DATE MAILED: 11/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,236

Applicant(s)

ELSTER ET AL.

Examiner

Juliana K. Kang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/20/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) 43-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-42, 51 and 52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/28/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Applicant's election without traverse of Group I (claims 1-42, 51 and 52) in the reply filed on 9/20/04 is acknowledged.

Inventorship

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-42, 51 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pauluth et al (U.S. Patent 6,137,576).

Regarding claims 1, 8 and 36, Pauluth et al disclose the claimed invention (see Fig. 1 and Fig. 7) except an optical fiber. Pauluth et al teaches using an optical waveguide for sensing region that is further coupled to an optical fiber (see Fig. 1). Using an optical fiber in the sensing region would not required coupling of the waveguide and the optical fiber thus providing improved coupling efficiency. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use an optical fiber in Pauluth et al to improve coupling efficiency.

Regarding claim 2, even though Pauluth et al does not specifically teach having curved sample channel, it would have been obvious to one having ordinary skill in the art to use any shape including curved shape since applicant does not provide criticality of having any particular shape.

Regarding claims 3-7 and 9-13, Pauluth et al show two planar mating pieces of the substrate structure not a monolithic structure. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a monolithic structure, since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. Since Pauluth et al's device comprises two mating pieces; the device would inherently be interchangeable.

Regarding claims 14-24, even though Pauluth et al only show one of each inlet, outlet and sample channel, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply any number of inlet, outlet and

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sample channels, since it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art.

Regarding claims 25 and 26, a standard microtiter plate has 9mm spacing, thus having 9mm spacing between sample channels would have been obvious in Pauluth et al.

Regarding claims 27-35, controlled delivery of the sample using various ways into the flow cell would have been obvious to one having ordinary skill in the art at the time the invention was made in order for the user to control the test for different applications.

Regarding claims 37-40 and 42, even though Pauluth et al do not teach that the grating is a long period or Bragg grating, these are well known types of grating that are used in the art. Thus it would have been obvious to one having ordinary skill in the art at the time the invention was made to use any gratings including long period or Bragg gratings (since applicant does not provide the criticality of having any particular grating) in Pauluth et al as long as the grating detects the sample being testes.

Regarding claims 51 and 52, since Pauluth et al show two mating pieces that are put together to make a flow cell, one with ordinary skill in the art would recognize having means to connect all mating pieces together in Pauluth et al in order to hold the pieces together.

Conclusion

5. The prior art documents submitted by applicant have been considered and made of record (note the attached copy of form PTO-1449).


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Reichert et al (US 2002/0034457 A1) teach integrated optic waveguide immunosensor. Pilevar et al (U.S. 6,558,958 B1) teach a fiber holder using in a flow cell (see Fig. 2).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juliana K. Kang whose telephone number is (571) 272-2348. The examiner can normally be reached on Mon. & Fri. 10:00-6:00 and Tue. & Thur. 10:00-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rod Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Juliana Kang
November 8, 2004